

Automated Collection and Transfer of Launch Range Surveillance/Intrusion Data, Phase I

Completed Technology Project (2009 - 2009)



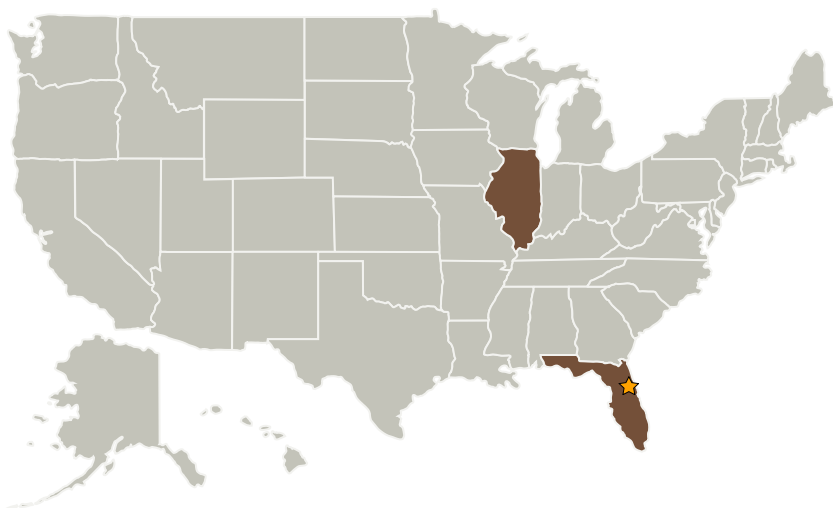
Project Introduction

This topic is designed by NASA lead agency Ames Research Center to address technologies that would enable a safer and more reliable space transportation capability. NASA is seeking innovative technologies including sensors and communication which expedite launch range clearance. Needed is equipment that will provide real time situation awareness for safe range operation from processing to launch and recovery. Proposed herein is a very small, low cost, high resolution, dual-mode lightweight sensor for remote detection, recognition, and identification of persons and objects that have intruded into areas of the identified range. The dual-mode sensor combines high resolution millimeter radar with high resolution electro-optical sensor. The proposed sensor is low cost and compact, meeting size, weight, power, and stability requirements for a variety of platforms, including unmanned vehicles, buoys, and high altitude air ships.

Anticipated Benefits

The dual mode surveillance object sensor system may be commercialized for use in defense and government surveillance applications, including (1) Detect vehicle and human movement in a military remote or urban environment, (2) Detect vehicle and human movement in border security or law enforcement activity, (3) Detect security violations (weapon detection) at portals to secure facilities, (4) Detect high value targets for terminal guidance of precision weapons (5) Automotive Collision Warning, and (6) Robotics Autonomous Operations.

Primary U.S. Work Locations and Key Partners



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Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Epsilon Lambda Electronics Corporation	Supporting Organization	Industry Small Disadvantaged Business (SDB), Veteran-Owned Small Business (VOSB)	West Chicago, Illinois

Primary U.S. Work Locations

Florida	Illinois
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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Project Manager:

Rick Birr

Principal Investigator:

Robert Knox

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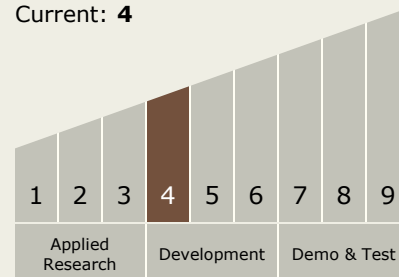
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Technology Maturity (TRL)

Start: 4

Current: 4



Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
 - └ TX16.5 Range Tracking, Surveillance, and Flight Safety Technologies